IDENTIFICATION OF *FUSARIUM* SPECIES, A PATHOGENIC FUNGUS, ASSOCIATED WITH THREE NATIVE WOODLAND PLANT SPECIES.

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The goal of this research project was to identify to the species level individual *Fusarium* cultures that were isolated from three species of *Hydrophyllum,* a common forest under-story plant. *Fusarium* is a genus of pathogenic microscopic soil fungi that can infect many different plant species, and typically causes wilt in susceptible species. We isolated the fungi from the plants and sequenced the beta-tubulin and alpha-elongation factor genes. We found five species of *Fusarium* and one species of *Glomerella* in *H. appendiculatum, H. canadense,* and *H. virginianum. Fusarium reticulatum* and *F. tricinctum* were the most common isolates. These species were present in all three *Hydrophyllum* species, and present in all of the St. Joseph County sites (Potato Creek, St. Patrick's, and Bendix Woods). A plant inoculation experiment was done to determine whether the isolated *Fusarium* strains could cause wilt when re-introduced to *H. appendiculatum* plants. Our results show that the treatment groups do show signs of wilt at a rate of 50%, 40%, 20%, and 10% of the host plants with signs of wilt disease.

E. Curtis was supported by Indiana University South Bend SMART grant